REMARKS

In the final Office Action, the Examiner rejected claim 3 under 35 U.S.C. § 112, second paragraph, as indefinite; rejected claims 1, 2, 4, 5, 7, 9-13, 15, 16, and 18 under 35 U.S.C. § 102(e) as anticipated by Yamada et al. (U.S. Patent Publication No. 2003/0137933); rejected claims 3, 8, and 14 under 35 U.S.C. § 103(a) as unpatentable over Yamada et al. in view of Heeren et al. (U.S. Patent No. 6,311,288); and rejected claims 6 and 17 under 35 U.S.C. § 103(a) as unpatentable over Yamada et al. in view of Nagata et al. (U.S. Patent No. 6,181,680).

Applicant respectfully traverses the Examiner's rejections under 35 U.S.C. §§ 112, 102, and 103. Claims 1-18 remain pending.

REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

At paragraph 16 of the final Office Action, the Examiner rejected claim 3 under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. The Examiner alleged that the claim language of claim 3 is not clearly understood because claim 3 recites switching from a currently used PVC connection to the currently used PVC connection, resulting in no switching taking place. Applicant respectfully disagrees.

To clarify what is recited in claim 3, it may be beneficial to first discuss claim 2 from which claim 3 depends. Claim 2 recites that if, while one of the PVC connections is used as a currently used PVC connection, it is detected from the corresponding controlling connection that trouble has occurred with the currently used PVC connection, then each of the exchanges switches the operative PVC connection to another one of the PVC connections as a bypassing PVC connection. In other words, claim 2 recites that the operative PVC connection is switched from the currently used PVC connection to the bypassing PVC connection.

Now, claim 3 recites that if, while the bypassing PVC connection is used, it is detected that the currently used PVC connection has been released through the corresponding controlling connection, then each of the exchanges switches the operative PVC connection to the currently used PVC connection. Since the operative PVC connection has been switched to the bypassing PVC connection in claim 2, claim 3 recites switching from the bypassing PVC connection to the currently used PVC connection, and not from the currently used PVC connection to the currently used PVC connection, as alleged by the Examiner.

In response to the above argument, the Examiner alleged that:

> After switching over to the bypassing PVC connection, the bypassing PVC connection becomes the currently used PVC connection and the troubled PVC connection becomes the previous used PVC connection. On the other hand, as recited in claim 3, while the bypassing PVC connection is used [i.e. which is the currently used PVC connection], it is detected that the currently used PVC connection [i.e. which is the bypassing PVC connection] has been released through the corresponding controlling connection, then each of the exchanges switches the operative PVC connection [i.e. which is the bypassing PVC connection] to the currently used PVC connection [i.e. which is the bypassing PVC connection]. So it is not clearly explain why the switching control method would switch from the bypassing PVC connection to the same bypassing PVC connection if that bypassing PVC connection has been released.

(final Office Action, paragraph 4). Applicant submits that the Examiner continues to misinterpret the language of claim 3.

Contrary to the Examiner's allegation, claim 3 does not recite that after switching over to the bypassing PVC connection, the bypassing PVC connection becomes the currently used PVC connection and the troubled PVC connection becomes the previous used PVC connection. Instead, after switching over to the bypassing PVC connection, the bypassing PVC connection nominally remains the bypassing PVC connection and the currently used PVC connection nominally remains the currently used PVC connection. No switching of nomenclature occurs in claim 2 or 3. Instead, the operative PVC connection switches from the currently used PVC

connection to the bypassing PVC connection when trouble has occurred with the currently used PVC connection (claim 2), and when the currently used PVC connection has been released, the operative connection is switched from the bypassing PVC connection back to the currently used PVC connection (claim 3). Therefore, Applicant submits that claim 3 appropriately defines the switching operation with regard to the currently used and bypassing PVC connections recited therein.

For at least these reasons, Applicant submits that claim 3 is definite under 35 U.S.C. § 112. Reconsideration and withdrawal of the rejection of claim 3 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

REJECTION UNDER 35 U.S.C. § 102 BASED ON YAMADA ET AL.

In paragraphs 18-30 of the final Office Action, the Examiner rejected claims 1, 2, 4, 5, 7, 9-13, 15, 16, and 18 under 35 U.S.C. § 102(e) as allegedly anticipated by Yamada et al. Applicant respectfully traverses the rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention either expressly or impliedly. Any feature not directly taught must be inherently present. In other words, the identical invention must be shown in as complete detail as contained in the claim. See M.P.E.P. § 2131. Yamada et al. does not disclose or suggest the combination of features recited in claims 1, 2, 4, 5, 7, 9-13, 15, 16, and 18.

Independent claim 1, for example, is directed to a PVC switching control method for controlling a PVC connection in a communication network. The PVC switching control method comprises setting a plurality of PVC connections and individually corresponding controlling connections between two exchanges of the communication network; detecting, by each of the

exchanges, occurrence of or release from trouble with a PVC connection through the corresponding controlling connection; and switching an operative PVC connection to another one of the PVC connections in response to a result of the detection.

Yamada et al. does not disclose or suggest the combination of features recited in claim 1. For example, Yamada et al. does not disclose or suggest setting a plurality of PVC connections and individually corresponding controlling connections between two exchanges of a communication network.

The Examiner alleged that Yamada et al. discloses primary connections, which allegedly correspond to a plurality of PVC connections in claim 1, and corresponding reserve relay connections, which allegedly correspond to the individually corresponding controlling connections recited in claim 1, and cited Figs. 2 and 3 and paragraphs 0009, 0042, 0046, and 0048 of Yamada et al. for support (final Office Action, paragraph 19). Applicant respectfully submits that this is an unreasonable interpretation of the disclosure of Yamada et al.

First, Applicant notes that the Examiner alleged that the reserve relay connections described by Yamada et al. (described, for example, at paragraphs 0041-0042) allegedly correspond to the "individually corresponding controlling connections" recited in claim 1 (final Office Action, paragraph 19). Applicant respectfully submits that this is an unreasonable allegation. With this interpretation in mind, nowhere does Yamada et al. disclose or remotely suggest detecting occurrence of or release from trouble with a PVC connection through the reserve relay connections, as would be required by claim 1. When addressing this additional feature of claim 1, the Examiner alleged that the control PVCs (described, for example, at paragraph 0043), and not the reserve relay connections, correspond to the individually

corresponding controlling connections recited in claim 1 (final Office Action, paragraph 19). This change in the rejection further supports Applicant's position that it is unreasonable to allege that the reserve relay connections are equivalent to the individually corresponding controlling connections, as recited in claim 1.

With the Examiner's latter interpretation in mind (i.e., that the control PVCs are allegedly equivalent to the individually controlling connections), Applicant continues to submit that Yamada et al. does not disclose or suggest setting a plurality of PVC connections and individually corresponding controlling connections between two exchanges of a communication network, as required by claim 1.

In Fig. 2, Yamada et al. shows an example of a relay connection management table (paragraph 0046). Nowhere in connection with Fig. 2, or elsewhere, does Yamada et al. disclose or remotely suggest setting a plurality of PVC connections and individually corresponding controlling connections (which the Examiner alleged are equivalent to control PVCs) between two exchanges, as required by claim 1. In fact, none of the figures or description of Yamada et al. provides a control PVC set up for each corresponding PVC connection, as would be required by claim 1.

In Fig. 3, Yamada et al. shows two exchanges being connected via two lines X and Y and a control PVC being set up for only line X. Nowhere in connection with Fig. 3, or elsewhere, does Yamada et al. disclose or remotely suggest setting a plurality of PVC connections and individually corresponding controlling connections (which the Examiner alleged are equivalent to control PVCs) between two exchanges, as required by claim 1. In fact, none of the figures or

description of Yamada et al. provides a control PVC set up for each corresponding PVC connection, as would be required by claim 1.

In paragraph 0009, Yamada et al. discloses:

> According to the present invention, there is provided a line backup method comprising the steps of: setting up a permanent virtual connection on a line connecting between a first exchange unit and a second exchange unit; performing periodic communication between the first exchange unit and the second exchange unit using the permanent virtual connection; detecting a failure of the line by monitoring the periodic communication at each of the first and second exchange units; and switching a connection on the line, at each of the first and second exchange units, to a reserve connection not using the same line, in the event that a failure of the line is detected.

In this section, Yamada et al. discloses setting up a PVC connection on a line connecting two exchange units and detecting a failure on the line by monitoring periodic communication. Nowhere in this section, or elsewhere, does Yamada et al. disclose or suggest setting a plurality of PVC connections and individually corresponding controlling connections (which the Examiner alleged are equivalent to control PVCs) between two exchanges, as required by claim 1.

In paragraph 0042, Yamada et al. discloses:

> In the exchange unit A, reference character A1 is a periodic communication processing block which performs periodic communication with the exchange unit B using the control PVC, A2 is a line failure detection block which determines that a line failure has occurred when the information being communicated is interrupted, and A3 is a relay connection switchover processing block which, when a line failure is detected, retrieves a relay connection accommodated on the failed line and a reserve connection corresponding to it from a relay connection management table A5, and performs the processing to cut off the affected connection and set up the corresponding reserve relay connection.

In this section, Yamada et al. discloses that periodic communication takes place on the control PVC and a line failure is determined to have occurred when the information being communicated is interrupted. Nowhere in this section, or elsewhere, does Yamada et al. disclose or suggest setting a plurality of PVC connections and individually corresponding controlling

connections (which the Examiner alleged are equivalent to control PVCs) between two exchanges, as required by claim 1.

In paragraph 0046, Yamada et al. discloses:

> FIG. 2 is a diagram showing an example of the configuration of the relay connection management table A5. The relay connection management table A5 is accessed by line number. For each line number, the relay connection management table A5 stores local node number 14a, remote-end node number 14b, reserve line remote-end node number 14c, reserve line number 14d, primary connection VP identifier 14e, primary connection VC identifier 14f, backup connection VP identifier 14g, backup connection VC identifier 14h, backup connection QOS 14i, backup connection usage bandwidth 14j, other backup connection attributes 14k, other node relay flag 14l, and opposite-end line backup indicating flag 14m.

In this section, Yamada et al. describes a relay connection management table. Nowhere in this section, or elsewhere, does Yamada et al. disclose or remotely suggest setting a plurality of PVC connections and individually corresponding controlling connections (which the Examiner alleged are equivalent to control PVCs) between two exchanges, as required by claim 1.

In paragraph 0048, Yamada et al. discloses:

> FIG. 4 is a diagram showing an example of the configuration of the terminating connection management table. The table stores, for each line number, local node number 16a, remote-end node number 16b, reserve line remote-end node number 16c, reserve line number 16d, primary connection VP identifier 16e, primary connection VC identifier 16f, backup connection VP identifier 16g, backup connection VC identifier 16h, backup connection QOS 16i, backup connection usage bandwidth 16j, and other alternate connection attributes 16k.

In this section, Yamada et al. describes another example of a relay connection management table. Nowhere in this section, or elsewhere, does Yamada et al. disclose or remotely suggest setting a plurality of PVC connections and individually corresponding controlling connections (which the Examiner alleged are equivalent to control PVCs) between two exchanges, as required by claim 1.

The Examiner further alleged that Yamada et al. discloses a PVC connection (as line X) and a corresponding controlling connection (as the control PVC), and shows a plurality of PVC connections and corresponding controlling connections (as lines X and Y), and cited Figs. 10 and 25 of Yamada et al. for support (final Office Action, paragraph 6). Applicant disagrees.

In Fig. 10, Yamada et al. shows two lines connecting exchange A and exchange B, one line connecting exchange A and exchange C, one line connecting exchange A and exchange D, two lines connecting exchange B and exchange C, and one line connecting exchange D and exchange C. Claim 1 recites setting a plurality of PVC connections and individually corresponding controlling connections between two exchanges of the communication network. Inasmuch as the Examiner appears to be alleging that the two lines between exchange A and exchange B, or the two lines between exchange B and exchange C are equivalent to the plurality of PVC connections and individually corresponding controlling connections, Applicant disagrees. Yamada et al. shows only a single control PVC (which the Examiner alleged is equivalent to a controlling connection) between exchange A and exchange B, and only a single control PVC between exchange B and exchange C (Fig. 10). Therefore, the Examiner's allegation with regard to Fig. 10 is without merit.

In Fig. 25, Yamada et al. shows three lines (X, Y, and Z) connecting exchange A and exchange B. Claim 1 recites setting a plurality of PVC connections and individually corresponding controlling connections between two exchanges of the communication network and switching an operative PVC connection to another one of the PVC connections in response to a result of detection of occurrence of or release from trouble. Yamada et al. discloses that line Z is the reserve line for lines X and Y and switching from line X and/or line Y to line Z

(paragraphs 0152 and 0153). Yamada et al. does not show that line Z has a control PVC (which the Examiner alleged is equivalent to a controlling connection). Therefore, Yamada et al. cannot disclose or suggest setting a plurality of PVC connections and individually corresponding controlling connections between two exchanges of the communication network and switching an operative PVC connection to another one of the PVC connections in response to a result of the detection, as required by claim 1.

For at least these reasons, Applicant submits that claim 1 is not anticipated by Yamada et al. Claims 2, 4, and 5 depend from claim 1 and are, therefore, not anticipated by Yamada et al. for at least the reasons given with regard to claim 1. Claims 2, 4, and 5 are also not anticipated by Yamada et al. for reasons of their own.

For example, claim 4 recites that the controlling connections are set by an operation administration and maintenance function. Yamada et al. does not disclose or suggest the combination of features recited in claim 4. The Examiner alleged that Yamada et al. discloses that controlling connections are set by an operation administration and maintenance function and cited paragraph 0006 of Yamada et al. for support (final Office Action, paragraph 21). Applicant respectfully disagrees.

At paragraph 0006, Yamada et al. discloses:

> This method, therefore, cannot handle logical failures (e.g., software failure) occurring within an exchange unit. It is also not possible to provide for voluntary switchover performed through maintenance and administration operations from a maintenance console, etc. If a connection between exchange units is to be switched manually, the only possible way is to issue a command to switch the connection from each of the maintenance consoles connected to the exchange units at both ends, and it is, therefore, not possible to switch the connection in a synchronized fashion between the exchange units.

In this section, Yamada et al. refers to a prior art technique that uses a virtual channel (VC) alarm indication signal (AIS) operation administration and maintenance (OAM) cell to detect the occurrence of a failure (see, e.g., paragraph 0005). Yamada et al. discloses disadvantages of using OAM cells to perform a switchover. Therefore, contrary to the Examiner's allegation, Yamada et al. does not disclose controlling connections that are set by an operation administration and maintenance function, as required by claim 4, but instead teaches away from these features.

Moreover, the Examiner has provided no motivation for combining the prior art technique disclosed by Yamada et al. with the system of Yamada et al. Therefore, the Examiner has not established a proper rejection of claim 4.

The Examiner further alleged that Yamada et al. discloses controlling connections that are set by an operation administration and maintenance function and cited Figs. 7 and 8, and paragraphs 0067 and 0074, of Yamada et al. for support (final Office Action, paragraph 8). Applicant disagrees.

With regard to Fig. 7, Yamada et al. discloses the situation where a connection on a line connecting between two exchange units is switched over to a reserve connection passing through a third exchange unit (paragraph 0056). Nowhere in connection with Fig. 7, or elsewhere, does Yamada et al. disclose or suggest controlling connections that are set by an operation administration and maintenance function.

With regard to Fig. 8, Yamada et al. discloses the situation where a connection switchover is performed manually by a command from a maintenance console (paragraph 0067). Contrary to the Examiner's allegation, a maintenance console is not equivalent to an operation

administration and maintenance function. Nevertheless, even assuming, for the sake of argument, that a maintenance console can be equated to an operation administration and maintenance function (a point that Applicant does not concede), nowhere does Yamada et al. disclose or suggest controlling connections that are set by a maintenance console, as would be required by claim 4 under the Examiner's interpretation. Instead, Yamada et al. discloses that the maintenance console issues a manual switchover request to cause a manual switchover to occur (paragraphs 0068-0073).

At paragraph 0067, Yamada et al. discloses:

> FIG. 8 is a diagram for explaining the operation performed when the connection switchover described with reference to FIGS. 1 and 3 is performed manually by a command from a maintenance console. The same elements as those in FIGS. 1 and 3 are designated by the same reference characters.

In this section, Yamada et al. discloses a connection switchover that is performed manually by a command from a maintenance console. For at least the reasons given above, Yamada et al. does not disclose or suggest controlling connections that are set by an operation administration and maintenance function, as required by claim 4.

At paragraph 0074, Yamada et al. discloses:

> FIG. 9 is a diagram for explaining the operation performed when the connection switchover described with reference to FIG. 6 is performed manually by a command from a maintenance console. The same elements as those in FIG. 8 are designated by the same reference characters. When a manual switchover request is issued from the maintenance console 7 connected to the exchange unit A, the information analyzing block A10 recognizes the manual switchover request and requests the information transmitting block A8 to send out the manual switchover request.

In this section, Yamada et al. discloses a connection switchover that is performed manually by a command from a maintenance console. For at least the reasons given above, Yamada et al. does

not disclose or suggest controlling connections that are set by an operation administration and maintenance function, as required by claim 4.

For at least these additional reasons, Applicant submits that claim 4 is not anticipated by Yamada et al.

Claim 5 recites that each of the exchanges detects trouble through receipt of an alarm indication signal cell from the operation administration and maintenance function over one of the controlling connections. Yamada et al. does not disclose or suggest this combination of features. The Examiner alleged that Yamada et al. discloses that each of the exchanges detects trouble through receipt of an alarm indication signal cell from the operation administration and maintenance function over one of the controlling connections and cited paragraph 0005 of Yamada et al. for support (final Office Action, paragraph 22). Applicant respectfully disagrees.

At paragraph 0005, Yamada et al. discloses:

> A connection-by-connection switchover control method for Virtual Channels (VCs) is disclosed in Japanese Unexamined Patent Publication No. 9-93260. However, since this method uses a VC AIS (Alarm Indication Signal) OAM cell to detect the occurrence of a failure and switch the connection, if transmission/reception of the OAM signal becomes impossible because of the failure, the switchover operation cannot be performed.

In this section, Yamada et al. discloses a prior art technique that uses a virtual channel (VC) alarm indication signal (AIS) operation administration and maintenance (OAM) cell to detect the occurrence of a failure. In paragraph 0006, Yamada et al. discloses disadvantages of using OAM cells to perform a switchover. Therefore, contrary to the Examiner's allegation, Yamada et al. does not disclose that each of the exchanges detects trouble through receipt of an alarm indication signal cell from the operation administration and maintenance function over one of the controlling connections, as required by claim 5, but instead teaches away from these features.

Moreover, the Examiner has provided no motivation for combining the prior art technique disclosed by Yamada et al. with the system of Yamada et al. Therefore, the Examiner has not established a proper rejection of claim 5.

The Examiner further alleged that Yamada et al. discloses a switchover request signal and its format and cited Fig. 5 and paragraphs 0052 and 0059 of Yamada et al. for support (final Office Action, paragraph 10). Applicant respectfully submits that Yamada et al. does not disclose or suggest that each of the exchanges detects trouble through receipt of an alarm indication signal cell from the operation administration and maintenance function over one of the controlling connections.

With regard to Fig. 5, at paragraph 0052, Yamada et al. discloses:

> FIG. 5 is a diagram showing an example of the communication information format used in the present invention. As shown, the information consists of message identifier 19a, periodic communication type 19b, automatic switchover information 19c, manual switchover information 19d, detailed information 1 designated by 19e, and detailed information 2 designated by 19f. The message identifier 19a indicates periodic communication when it is "0", automatic switchover when it is "1", and manual switchover when it is "2". The periodic communication type information 19b indicates an acknowledgement request when it is "0", and a response notification when it is "1". The automatic switchover information 19c indicates a switchover request when it is "0", and a processing completion notification when it is "1". The manual switchover information 19d indicates a switchover request when it is "0", and a processing completion notification when it is "1". The detailed information 1 indicates the primary line number, while the detailed information 2 shows other information storage areas.

In this section, Yamada et al. discloses a communication information format that includes a message identifier, a periodic communication type, automatic switchover information, manual switchover information, detailed information 1, and detailed information 2. Nowhere in this section, or elsewhere, does Yamada et al. disclose or suggest an alarm indication signal cell, let alone that each of the exchanges detects trouble through receipt of an alarm indication signal cell

from the operation administration and maintenance function over one of the controlling connections, as required by claim 5.

At paragraph 0059, Yamada et al. discloses:

> Thereupon, the information transmitting blocks A8 and C8 send a switchover request signal to the exchange unit D to which the reserve lines are connected. At the exchange unit D, an information receiving block D9 receives the information from the exchange units A and C, and passes the received information to an information analyzing block D10. The information analyzing block D10 analyzes the information and sends a connection setup request to a designated connection setup block D11.

In this section, Yamada et al. discloses processing of a switchover request signal. Nowhere in this section, or elsewhere, does Yamada et al. disclose or suggest an alarm indication signal cell, let alone that each of the exchanges detects trouble through receipt of an alarm indication signal cell from the operation administration and maintenance function over one of the controlling connections, as required by claim 5.

For at least these additional reasons, Applicant submits that claim 5 is not anticipated by Yamada et al.

Independent claim 7 is directed to a PVC switching control method for controlling a PVC connection in a communication network. The method comprises setting a master PVC connection and a master side operation administration and maintenance (OAM) connection corresponding to the master PVC connection between a first exchange and a second exchange; setting a bypassing PVC connection prepared in advance for bypassing of the master PVC connection and a bypassing side OAM connection corresponding to the bypassing PVC connection between the first and second exchanges; and switching, if both of the first and second exchanges detect trouble of the master PVC connection through the master side OAM

connection, the master PVC connection to the bypassing PVC connection at the first and second exchanges.

Yamada et al. does not disclose or suggest the combination of features recited in claim 7. For example, Yamada et al. does not disclose or suggest setting a bypassing PVC connection prepared in advance for bypassing of a master PVC connection and a bypassing side OAM connection corresponding to the bypassing PVC connection between first and second exchanges.

The Examiner alleged that Yamada et al. discloses a set of reserve line connections, which the Examiner alleged was equivalent to bypassing PVC connections and cited Figs. 2 and 4, and paragraphs 0046 and 0048 of Yamada et al. for support (final Office Action, paragraph 23). Regardless of the merit of the Examiner's allegation, Applicant submits that the Examiner did not fully address the features of claim 7. Claim 7 recites setting a bypassing PVC connection prepared in advance for bypassing of the master PVC connection and a bypassing side OAM connection corresponding to the bypassing PVC connection between the first and second exchanges. Yamada et al. discloses nothing similar to a bypassing side OAM connection, as required by claim 7. The Examiner did not address this portion of claim 7 and, therefore, did not establish a proper case of anticipation with regard to claim 7.

In Fig. 2, Yamada et al. shows an example of a relay connection management table (paragraph 0046). Nowhere in connection with Fig. 2, or elsewhere, does Yamada et al. disclose or remotely suggest setting a bypassing PVC connection prepared in advance for bypassing of a master PVC connection and a bypassing side OAM connection corresponding to the bypassing PVC connection between first and second exchanges, as required by claim 7.

In Fig. 4, Yamada et al. shows another example of a relay connection management table. Nowhere in connection with Fig. 4, or elsewhere, does Yamada et al. disclose or remotely suggest setting a bypassing PVC connection prepared in advance for bypassing of a master PVC connection and a bypassing side OAM connection corresponding to the bypassing PVC connection between first and second exchanges, as required by claim 7.

Paragraph 0046 of Yamada et al. has been reproduced above. In this section, Yamada et al. describes a relay connection management table. Nowhere in this section, or elsewhere, does Yamada et al. disclose or remotely suggest setting a bypassing PVC connection prepared in advance for bypassing of a master PVC connection and a bypassing side OAM connection corresponding to the bypassing PVC connection between first and second exchanges, as required by claim 7.

Paragraph 0048 of Yamada et al. has been reproduced above. In this section, Yamada et al. describes another example of a relay connection management table. Nowhere in this section, or elsewhere, does Yamada et al. disclose or remotely suggest setting a bypassing PVC connection prepared in advance for bypassing of a master PVC connection and a bypassing side OAM connection corresponding to the bypassing PVC connection between first and second exchanges, as required by claim 7.

The Examiner also alleged that Yamada et al. discloses a connection management table that stores backup connection identifiers (which the Examiner equated to a bypassing PVC connection), backup connection QoS, backup connection usage bandwidth and other backup connection attributes (which the Examiner equated to a bypassing side OAM connection) (final Office Action, paragraph 12). Applicant submits that the Examiner's interpretation of Yamada et

al. is unreasonable. A backup connection quality of service (QoS), a backup connection usage bandwidth, and/or backup connection attributes cannot reasonably be equated to a bypassing OAM connection that corresponds to a bypassing PVC connection, as required by claim 7.

For at least these reasons, Applicant submits that claim 7 is not anticipated by Yamada et al. Claims 9 and 10 depend from claim 7 and are, therefore, not anticipated by Yamada et al. for at least the reasons given with regard to claim 7.

Independent claim 11 recites features similar to, but possibly different in scope from, features recited in claim 1. Claim 11 is, therefore, not anticipated by Yamada et al. for at least reasons similar to reasons given with regard to claim 1. Claims 12, 13, 15, and 16 depend from claim 11 and are, therefore, not anticipated by Yamada et al. for at least the reasons given with regard to claim 11. Claims 12, 13, 15, and 16 are also not anticipated by Yamada et al. for reasons of their own. For example, claims 12, 13, 15, and 16 recite features similar to, but possibly different in scope from, features recited in claims 2, 4, and 5. Therefore, claims 12, 13, 15, and 16 are not anticipated by Yamada et al. for at least reasons similar to reasons given with regard to claims 2, 4, and 5.

Independent claim 18 recites features similar to, but possibly different in scope from, features recited in claim 7. Claim 18 is, therefore, not anticipated by Yamada et al. for at least reasons similar to reasons given with regard to claim 7.

For at least the foregoing reasons, Applicant respectfully requests the Examiner's reconsideration and withdrawal of the rejection of claims 1, 2, 4, 5, 7, 9-13, 15, 16, and 18 under 35 U.S.C. § 102 based on Yamada et al.

REJECTION UNDER 35 U.S.C. § 103 BASED ON YAMADA ET AL. AND HEEREN ET AL.

In paragraphs 32-35 of the final Office Action, the Examiner rejected claims 3, 8, and 14 under 35 U.S.C. § 103(a) as allegedly unpatentable over Yamada et al. in view of Heeren et al. Applicant respectfully traverses the rejection.

Claim 3 depends from claim 1. The disclosure of Heeren et al. does not cure the deficiencies in the disclosure of Yamada et al. identified above with regard to claim 1. Claim 3 is, therefore, patentable over Yamada et al. and Heeren et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 1.

Claim 3 is also patentable for reasons of its own. For example, claim 3 recites that if, while the bypassing PVC connection is used, it is detected that the currently used PVC connection has been released through the corresponding controlling connection, then each of the exchanges switches the operative PVC connection to the currently used PVC connection. Neither Yamada et al. nor Heeren et al., whether taken alone or in any reasonable combination, discloses or suggests the combination of features recited in claim 3.

The Examiner admitted that Yamada et al. does not disclose the features of claim 3 (final Office Action, paragraph 33). The Examiner alleged, however, that Heeren et al. discloses the features of claim 3 and cited the abstract and column 3, lines 50-57, of Heeren et al. for support (final Office Action, paragraph 33). Applicant disagrees.

The abstract of Heeren et al. discloses:

> A system and method for the detection of permanent virtual circuit failures in a communication network determines and classifies failures based upon physical or logical criteria. Upon detection of a physical failure or a logical failure the virtual circuit backup logic will establish an alternate path in order to selectively reroute information avoiding the failed primary path. Once the primary path is again available, the logic of the present invention will restore the communication from the alternate path to the primary path. The virtual circuit backup logic will selectively provide an alternate path for communication

> traffic on a per data link connection identifier (DLCI) basis, thus enabling a single link to be backed up over multiple links.

In this section, Heeren et al. discloses that upon detection of a failure in a primary path, an alternate path will be established and when the primary path becomes available again, communication will be restored on the primary path. Nowhere in this section, or elsewhere does Heeren et al. disclose or suggest if, while the bypassing PVC connection is used, it is detected that the currently used PVC connection has been released through the corresponding controlling connection, then each of the exchanges switches the operative PVC connection to the currently used PVC connection, as required by claim 3. In other words, claim 3 recites that the currently used PVC connection is detected to have been released through the corresponding controlling connection. Heeren et al. discloses nothing similar to a corresponding controlling connection, as required by claim 3.

At column 3, lines 50-57, Heeren et al. discloses:

> Therefore, it would be desirable to provide a system and method that will detect the failure of a physical link, as well as the failure of a logical link, in a frame relay network and perform backup based upon the physical failure, and furthermore, that will selectively configure the establishment of a backup circuit and restore the primary circuit based upon the particular virtual circuit failure that occurs.

Nowhere in this section, or elsewhere does Heeren et al. disclose or suggest if, while the bypassing PVC connection is used, it is detected that the currently used PVC connection has been released through the corresponding controlling connection, then each of the exchanges switches the operative PVC connection to the currently used PVC connection, as required by claim 3. Heeren et al. discloses nothing similar to a corresponding controlling connection, as required by claim 3.

The Examiner also alleged that Heeren et al. discloses a system that queries to determine whether the primary link has been restored or is otherwise again available, and the virtual circuit backup logic determines the availability of the primary link by detecting if the primary destination circuit is in the alarm state (final Office Action, paragraph 14). Regardless of the merit of the Examiner's allegation, Applicant submits that the Examiner has not established that Heeren et al. discloses or suggests anything remotely similar to a corresponding controlling connection, let alone if, while a bypassing PVC connection is used, it is detected that a currently used PVC connection has been released through the corresponding controlling connection, then each of the exchanges switches the operative PVC connection to the currently used PVC connection, as required by claim 3. Therefore, the Examiner has not established a prima facie case of obviousness with regard to claim 3.

For at least these additional reasons, Applicant submits that claim 3 is patentable over Yamada et al. and Heeren et al., whether taken alone or in any reasonable combination.

Claim 8 depends from claim 7. The disclosure of Heeren et al. does not cure the deficiencies in the disclosure of Yamada et al. identified above with regard to claim 7. Claim 8 is, therefore, patentable over Yamada et al. and Heeren et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 7.

Claim 8 is also patentable for reasons of its own. For example, claim 8 recites features similar to, but possibly different in scope from, features recited in claim 3. Claim 8 is, therefore, also patentable over Yamada et al. and Heeren et al. for at least reasons similar to reasons given with regard to claim 3.

Claim 14 depends from claim 11. The disclosure of Heeren et al. does not cure the deficiencies in the disclosure of Yamada et al. identified above with regard to claim 11. Claim 14 is, therefore, patentable over Yamada et al. and Heeren et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 11.

Claim 14 is also patentable for reasons of its own. For example, claim 14 recites features similar to, but possibly different in scope from, features recited in claim 3. Claim 14 is, therefore, also patentable over Yamada et al. and Heeren et al. for at least reasons similar to reasons given with regard to claim 3.

For at least the foregoing reasons, Applicant respectfully requests the Examiner's reconsideration and withdrawal of the rejection of claims 3, 8, and 14 under 35 U.S.C. § 103 based on Yamada et al. and Heeren et al.

REJECTION UNDER 35 U.S.C. § 103 BASED ON YAMADA ET AL. AND NAGATA ET AL.

In paragraphs 36-38 of the final Office Action, the Examiner rejected claims 6 and 17 under 35 U.S.C. § 103(a) as allegedly unpatentable over Yamada et al. in view of Nagata et al. Applicant respectfully traverses the rejection.

Claims 6 and 17 depend from claims 1 and 11, respectively. Without acquiescing in the Examiner's rejection with regard to claims 6 and 17, Applicant submits that the disclosure of Nagata et al. does not cure the deficiencies in the disclosure of Yamada et al. identified above with regard to claims 1 and 11. Claims 6 and 17 are, therefore, patentable over Yamada et al. and Nagata et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claims 1 and 11.

For at least the foregoing reasons, Applicant respectfully requests the Examiner's reconsideration and withdrawal of the rejection of claims 6 and 17 under 35 U.S.C. § 103 based on Yamada et al. and Nagata et al.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests the Examiner's reconsideration of the application and the timely allowance of pending claims 1-18.

As Applicant's remarks with respect to the Examiner's rejections overcome the rejections, Applicant's silence as to certain assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, etc.) is not a concession by Applicant that such assertions are accurate or that such requirements have been met, and Applicant reserves the right to dispute these assertions/requirements in the future.

If the Examiner believes that the application is not now in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned to discuss any outstanding issues.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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